Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-3. (Cancelled)

4. (Currently Amended) A purified or non-naturally occurring mutant polypeptide comprising an amino acid sequence which is at least 96% identical to the retroviral envelope polypeptide amino acid sequence shown in SEQ ID NO: 2, with percentage identity calculated relative to the full length of SEQ ID NO:2, wherein said polypeptide is

~~a)~~ capable of mediating retroviral infection of a mouse or human cell ~~by use of the polytropic/xenotropic receptor encoded by the Rmc1 locus of the NIH Swiss inbred NFS/N mouse for entry and unable of mediating infection of a cell by use of a human polytropic/xenotropic receptor encoded by the human RMC1 locus or~~

~~b) capable of mediating infection of a human cell, and~~

~~wherein said polypeptide of (b) differs from SEQ ID NO:2 by at least one substitution in the VR3 region of SEQ ID NO:2~~.

5. (Cancelled)

6. (Previously Presented) A polypeptide according to claim 4, wherein said polypeptide differs from SEQ ID NO:2 at least by substitution at position 212 in SEQ ID NO: 2.

7. (Currently Amended) A polypeptide according to claim ~~4~~ 62, wherein said at least one substitution alters the host tropism of a virus or an infectious particle comprising said polypeptide.

8. (Previously Presented) A polypeptide according to claim 4, wherein said purified polypeptide is a murine retroviral envelope polypeptide capable of mediating infection of a human cell.

9. (Previously Presented) A purified or non-naturally occurring mutant polypeptide

comprising an amino acid sequence which is at least 95% identical to the retroviral envelope polypeptide amino acid sequence shown in SEQ ID NO: 2, with percentage identity calculated relative to the full-length of SEQ ID NO:2, wherein said polypeptide is

a) capable of mediating infection of a cell by use of the polytropic/xenotropic receptor encoded by the Rmc1 locus of the NIH Swiss inbred NFS/N mouse for entry and unable of mediating infection of a cell by use of a human polytropic/xenotropic receptor encoded by the human RMC1 locus or

b) capable of mediating infection of a human cell,

wherein said polypeptide differs from SEQ ID NO:2 at least by a substitution at position 212 in SEQ ID NO: 2 with methionine.

10. (Previously Presented) A polypeptide according to claim 4 capable of mediating a higher infectivity in human cells than MCF-247, MCF-13 and X-MLV (NZB) viruses.

11. (Withdrawn) A polypeptide according to claim 4, further comprising an inserted non-viral sequence capable of redirecting the target cell specificity, by the resultant chimeric envelope.

12. (Withdrawn) A polypeptide according to claim 11, wherein the chimeric envelope further contains secondary mutations, enabling activation of the fusiogenic properties of said chimeric envelope, by binding to the receptor target.

13. (Withdrawn) A polypeptide according to claim 11, wherein said inserted sequence is a single chain antibody.

14. (Withdrawn) A polypeptide according to claim 4, further comprising a chemical modification of said envelope.

15. (Withdrawn) A polypeptide according to claim 14, wherein said chemical modification enhances and/or alters the host tropism.

16. (Withdrawn) A recombinant mammalian cell displaying a polypeptide according to claim 4.

17. (Withdrawn) An isolated nucleic acid sequence encoding any of the polypeptides according to claim 4.

18. (Cancelled)

19. (Withdrawn) A vector comprising a polypeptide according to claim 4, wherein said vector is a recombinant mammalian expression vector or a retroviral expression vector.

20. (Cancelled)

21. (Withdrawn) A replication competent retrovirus, comprising a polypeptide according to claim 4, wherein said polypeptide is capable of mediating infection of a human cell and wherein said polypeptide includes at least one substitution in the VR3 region.

22. (Withdrawn) A replication competent retrovirus comprising a polypeptide according to claim 4 and further comprising a heterologous translation cassette.

23. (Cancelled)

24. (Withdrawn) A retrovirus according to claim 22, wherein said heterologous translation cassette consists of an IRES-gene element.

25-26. (Cancelled)

27. (Withdrawn) A vector according to claim 19, further comprising at least one heterologous gene to be expressed.

28. (Withdrawn) A vector according to claim 27, wherein expression of the envelope is directed by an IRES-element.

29. (Withdrawn) A packaging cell construct comprising a recombinant mammalian expression vector comprising a nucleic acid coding for a polypeptide according to claim 4, and a non-viral or viral promoter and poly-adenylation signals.

30. (Withdrawn) A method for the generation of a packaging cell said method comprising use of a vector according to claim 19.

31. (Withdrawn) A method for expression of a polypeptide in a cell constitutively expressing the gag/pol genes of simple retroviruses said method comprising use of a vector according to claim 19.

32. (Withdrawn) A method for the preparation of a composition for the modification of a cell, said method comprising use of a packaging cell according to claim 29.

33. (Withdrawn) A method for the preparation of a composition for the modification of a cell said method comprising use of a virus according to claim 22.

34. (Cancelled)

35. (Withdrawn) Method according to claim 39, wherein said rodent constitutively express the gag/pol genes of simple retroviruses.

36. (Withdrawn) Method according to claim 39, wherein said rodent express the gag/pol genes of simple retroviruses in a tissue specific manner.

37. (Withdrawn) Method according to claim 39, wherein said rodent expression of the gag/pol genes of simple retroviruses is developmentally regulated.

38. (Cancelled)

39. (Withdrawn) A method for gene discovery comprising

a) providing

i) a recombinant mammalian expression vector; or

ii) a replication competent retrovirus; or

iii) a retroviral expression vector

wherein said vector or virus comprises a purified polypeptide according to claim 4;

b) infecting a new-born rodent with said virus or vector

c) inducing a tumour by means of said virus or vector

d) isolating said tumour in said rodent

e) identifying a gene involved in the oncogenesis by cloning the integration site of said virus or vector in said tumour.

40. (Withdrawn) A method according to claim 39 for gene discovery of a cancer related gene.

41-42. (Cancelled)

43. (Previously presented) The polypeptide of claim 4 which comprises an amino acid sequence which is at least 97% identical to the amino acid sequence shown in SEQ ID NO:2.

44. (Previously presented) The polypeptide of claim 4 which comprises an amino acid sequence which is at least 98% identical

to the amino acid sequence shown in SEQ ID NO:2.

45. (Previously presented) The polypeptide of claim 4 which comprises an amino acid sequence which is at least 99% identical to the amino acid sequence shown in SEQ ID NO:2.

46. (Previously presented) The polypeptide of claim 4 which comprises an amino acid sequence which is identical to the amino acid sequence shown in SEQ ID NO:2.

47. (Previously presented) The polypeptide of claim 4 which comprises a first subsequence WGLRLY (amino acids 203-208 of SEQ ID NO:2) and second subsequence DP (amino acids 214-215 of SEQ ID NO:2), the first and second subsequences being separated by five amino acids.

48. (Previously Presented) A purified or non-naturally occurring mutant polypeptide comprising an amino acid sequence which is at least 95% identical to the retroviral envelope polypeptide sequence shown in SEQ ID NO: 2, with percentage identity calculated over the full length of SEQ ID NO:2, and which comprises a subsequence identical to the VR3 region (amino acids 199-213) of SEQ ID NO:2, wherein said polypeptide is

a) capable of mediating infection of a cell by use of the polytropic/xenotropic receptor encoded by the Rmc1 locus of the NIH Swiss inbred NFS/N mouse for entry and unable of mediating infection of a cell by use of a human polytropic/xenotropic receptor encoded by the human RMC1 locus.

49. (Previously Presented) The polypeptide according to claim 4, wherein said polypeptide differs from SEQ ID NO:2 at least by a substitution at position 212 in SEQ ID NO: 2 with methionine.

50. (New) The polypeptide of claim 4 which comprises an amino acid sequence which is at least 99.5% identical to the amino acid sequence shown in SEQ ID NO:2.

51. (New) The polypeptide according to claim 4, wherein said polypeptide comprises an amino acid sequence that differs

from SEQ ID NO:2, if at all, solely at amino acid position at which it differs from the aligned amino acid sequence of the envelope polypeptide of at least one of the viruses listed in Figure 1.

52. (New) The polypeptide according to claim 4, wherein said polypeptide comprises an amino acid sequence that differs from SEQ ID NO:2, if at all, solely at amino acid at which it differs from the aligned sequence of the envelope polypeptide of MCF247 according to the alignment set forth in SEQ ID NO:2.

53. (New) the polypeptide according to claim 4, wherein said polypeptide differs from SEQ ID NO:2, if at all, solely in the leader, VRA, VRB and/or VR3 regions of SEQ ID NO:2.

54. (New) The polypeptide of claim 4 which comprises an amino acid sequence which is at least 99.5% similar to the amino acid sequence shown in SEQ ID NO:2.

55. (New) The polypeptide according to claim 4, which comprises a VR3 region that is identical to the VR3 region (amino acids 199-213) of SEQ ID NO:2 or differs therefrom solely by 1-6 substitutions.

56. (New) The polypeptide according to claim 4, wherein said polypeptide comprises an amino acid sequence that differs from SEQ ID NO:2, if at all, solely by one or more amino acid substitutions.

57. (New) The polypeptide according to claim 4, wherein said polypeptide is able to mediate infection of a mouse cell but unable to mediate infection of a human cell.

58. (New) The polypeptide according to claim 4, wherein the mediation of infection of a mouse cell is by use of the polytropic/xenotropic receptor encoded by the mouse Rmc1 locus.

59. (New) The polypeptide according to claim 57, wherein the mediation of infection of a mouse cell is by use of the polytropic/xenotropic receptor encoded by the mouse Rmc1 locus.

60. (New) The polypeptide according to claim 59, wherein the mouse Rmc1 locus is that of the NIH Swiss inbred NFS/N mouse.

61. (New) The polypeptide according to claim 4, which is

able to mediate infection of both mouse and human cells.

62. (New). The polypeptide according to claim 4, wherein said polypeptide is capable of mediating infection of a human cell, and differs from SEQ ID NO:2 by at least one substitution in the VR3 region (amino acids 199-213) of SEQ ID NO:2.